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Determinants of elite athletes' commitment to sport : examination of the sport commitment model in the professional sport domain

Tammy Kay Hall
Portland State University

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APPROVED BY THE MEMBERS OF THE THESIS COMMITTEE:

[redacted]

Gerald D. Guthrie, Chair

[redacted]

Leslie G. McBride

[redacted]

Nancy A. Perrin

[redacted]

Laurie A. Skokan

[redacted]

Milan D. Svoboda

This study examined the applicability of the Sport Commitment Model for a group of elite, professional athletes. The model proposes that an athlete's commitment will increase as sport enjoyment, personal investments, social constraints, and involvement opportunities increase and will decrease with an increase in involvement opportunities. The influence of identification as an athlete, a determinant of commitment not included in the original model, was also examined. One hundred and eighty three

professional football players from the Canadian Football League (CFL) (n = 121) and National Football League (NFL) (n = 69) participated in the study. Each subject completed a modified version of the original questionnaire developed to test the constructs in the Sport Commitment Model (Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993) during a team meeting. Internal consistency reliabilities for the final items in all seven scales were acceptable. Confirmatory factor analysis indicated marginal overall fit (AGFI = 0.757) demonstrating good construct validity and discriminant validity for each scale. Zero-order correlations between commitment and its predictor constructs were significant and in the hypothesized direction for all predictor constructs except social constraints. The correlation between commitment and social constraints was negative and nonsignificant. The simultaneous regression analysis results found the predictor constructs accounted for 38% of the variance in commitment. Identification uniquely accounted for the most variance followed by enjoyment, involvement alternatives, and involvement opportunities. Only personal investments and social constraints did not contribute a significant amount of unique variance to sport commitment. The importance and meaning of the relationships between commitment and its determinants for professional athletes are discussed, as well as directions for future research.

DETERMINANTS OF ELITE ATHLETES' COMMITMENT TO SPORT: EXAMINATION OF THE SPORT COMMITMENT MODEL IN THE PROFESSIONAL SPORT DOMAIN

by

TAMMY KAY HALL

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TO THE OFFICE OF GRADUATE STUDIES:

The members of the Committee approve the thesis of Tammy Kay Hall presented August 31, 1993.

[redacted]

Gerald D. Guthrie, Chair

[redacted]

Leslie G. McBride

[redacted]

Nancy A. Perrin

[redacted]

Laurie A. Skokan

[redacted]

Milan D. Svoboda

APPROVED:

[redacted]

James A Paulson, Chair, Department of Psychology

[redacted]

Roy W. Koch, Vice Provost for Graduate Studies and Research

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Commitment has long been identified as an important factor for athletic success. Throughout the sport psychology literature, commitment is cited as a necessary component underlying persistence, motivation, and achieving goals in sport. Although sport commitment is a popular concept in sport psychology, very little empirical research has focused on this construct. Recently, however, Scanlan, Carpenter, Schmidt, Simons, and Keeler (1993) developed a theoretical model which examines both the meaning and antecedents of sport commitment. This model is promising since initial testing with youth-sport athletes has supported the proposed relationships in the model (Carpenter, Scanlan, Simons, & Lobel, 1993; Scanlan & Carpenter et al., 1993; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993).

Examination of the Sport Commitment Model and its initial tests reveal the need for further investigation. First, as the antecedents and meaning of commitment will likely vary between athletes of different age and skill levels, this model should be tested with different athlete populations (Scanlan & Carpenter et al., 1993; Scanlan & Simons et al., 1993). For example, the motivation for professional athletes' commitment will presumably be very different than that for youth athletes. Second, the completeness of the constructs defining the model should be examined. One possible antecedent of sport commitment which does not appear to be included in this theoretical model is identification as an athlete. Review of the sport commitment literature suggests that the importance of

identification is a significant determinant of one's commitment (Lerch, 1984; Murrell & Dietz, 1992; Ogilvie & Howe, 1986; Rosenberg, 1984; Wolff & Lester, 1989; Yair, 1990).

This research was an attempt to validate the Sport Commitment Model in the professional athlete domain and to investigate the possible contribution of the concept of identification with one's sport to the model. For this study, an elite or professional athlete was defined as an athlete who competes at the national level and receives financial compensation for participating in the sport.

OVERVIEW OF SPORT COMMITMENT

THE SPORT COMMITMENT MODEL

Overview of the Sport Commitment Model

Drawing from social psychology literature, Scanlan and Carpenter et al. (1993) define sport commitment as "a psychological construct representing the desire or resolve to continue sport participation" (p. 6). From previous research on commitment in romantic relationships (Becker, 1960; Kelley, 1983; Rusbult, 1980), they identified three major classes of determinants for commitment: attraction, alternatives, and restraining forces. Attraction is labeled as sport enjoyment within the sport commitment model and is defined as "a positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking, and fun" (p. 6). The alternatives class within the sport commitment model refers to involvement alternatives and is defined as "the attractiveness of the most preferred alternative(s) to continued participation in the current endeavor" (p. 7). Restraining forces are represented by three constructs in the model: personal investments, social constraints, and involvement opportunities. Personal investments are defined as "personal resources that are put into the activity which cannot be recovered if participation is discontinued" (p. 7). The construct of social constraints is defined as "social expectations or norms which create feelings of obligation to remain in the activity" (p. 7). The definition for involvement

opportunities is "valued opportunities that are only present through continued involvement" (p. 8).

Figure 1 presents the Sport Commitment Model. The proposed direction of the relationship between the various constructs are identified by a plus (+) sign for a positive relationship and a minus (-) sign for a negative relationship.

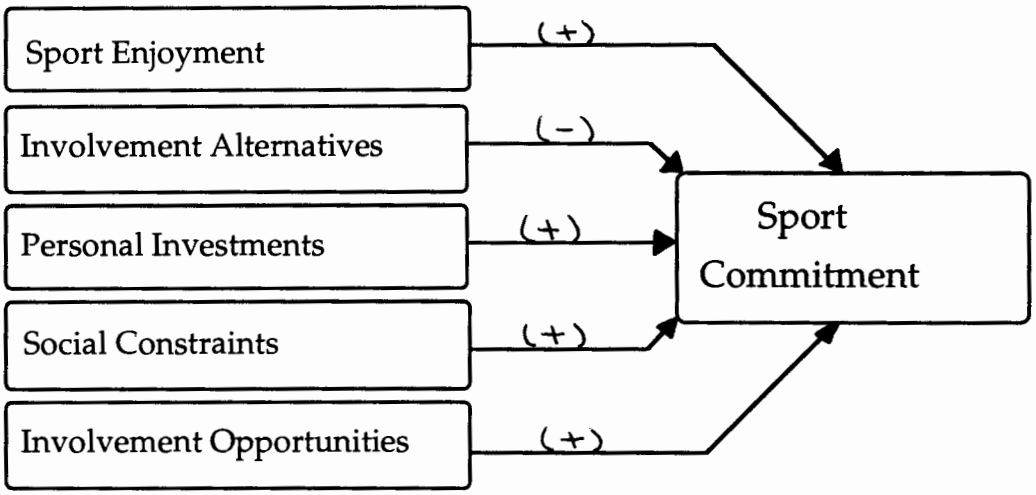

Figure 1. The Sport Commitment Model. From "The Construct of Sport Enjoyment" (p. 200) by T. K. Scanlan and J. P. Simons in Motivation in Sport and Exercise. G. C. Roberts (Ed.) 1992. Champaign, IL: Human Kinetics.

Sport enjoyment. According to Scanlan & Simons (1992), enjoyment is a broad construct which can result from both extrinsic sources (e. g., social recognition) and intrinsic sources (e. g., sensory experience) as well as achievement (e. g., winning) and non achievement (e. g., group membership) outcomes. Numerous studies have identified enjoyment or fun as motivation for continued participation in sports (Gill, Gross, & Huddleston, 1981; Gould, Feltz, & Weiss, 1985; Gould, Feltz, Weiss, & Petlichkoff, 1982).

After reviewing the literature concerning participation motivation in young athletes, Gould and Horn (1984) concluded that having fun is a major reason for continuing sport participation and lack of fun is one important reason for dropping out. Scanlan and Lewthwaite (1986) found a strong positive correlation of .70 between wrestlers' reported sport enjoyment and their desire to continue wrestling. Furthermore, models of participation motivation identify enjoyment as a strong determinant of continued involvement in sports. Similar models proposed by Schmidt and Stein (1991) and Gould and Petlichkoff (1988) suggest that athletes will continue to participate in sports as long as the experience is enjoyable. They drop out or quit participating when sports are no longer fun. Thus, the model proposes that greater sport commitment will result when sport enjoyment is high.

Involvement alternatives. Alternatives are those activities that the athlete can't participate in because of his or her involvement in sport. An example would be the high school basketball player who likes to sing and wants to be in the school choir but can't because practice times are the same. This construct was included in the Sport Commitment Model based on research concerning commitment in relationships. Rusbult (1980) demonstrated that the attractiveness of an individual's alternatives was related to commitment. Those individuals who reported attractive alternatives also reported lower commitment to their relationship and individuals with less attractive alternatives reported higher levels of commitment. Furthermore, research suggests that individuals with high levels of commitment devalue alternatives (Johnson & Rusbult, 1989). This model proposes a negative relationship between involvement alternatives

and sport commitment, namely that more desirable alternatives will lead to decreased commitment.

Personal investments. According to Scanlan and Carpenter et al. (1993) personal investments are resources that are put into the sport such as time, effort and money. The basis for inclusion of this construct in the Sport Commitment Model also resulted from the research on relationship commitment. In one study, subjects read a short relationship story and responded to questions about one of the individuals involved (Rusbult, 1980). The results showed that increased investment by the individual was related to subjects' perceived commitment of that individual to the relationship. Based on this research, sport commitment should increase as investments increase.

Social constraints. Becker's (1960) theory of commitment and idea of "side bets" led to the social constraints factor in the Sport Commitment Model. This idea specifically addresses the issue of societal pressure to participate in sport (Scanlan & Carpenter et al., 1993). A side bet is when an individual makes something of value to himself or herself dependent on a consistent line of activity. If this line of activity is not consistently followed, the individual loses that which was valuable to him or her. For example, a son may value his father's attention and believe that to get this attention he must continue to play baseball. Thus, the son has staked his father's attention (side bet) on his continued participation in baseball. Becker argues that individuals make side bets to keep themselves on a course of action that is socially acceptable. Since our society places so much value on participating in sports and being good athletes, social constraints are an important antecedent

of commitment to one's sport. Thus, increases in an athletes' perception of negative sanctions leads to greater commitment (Scanlan & Carpenter et al.).

Involvement opportunities. This construct can refer to both possible and guaranteed opportunities that result from continued involvement and participation. The chance to be with friends is an example of an involvement opportunity that is certain and the chance for a college athletic scholarship is a possible opportunity. Scanlan and Carpenter et al. (1993) emphasize the importance of the anticipation of such opportunities and experiences rather than their certainty. It is not as important that the athlete actually experiences the opportunities. Instead, the essential element is that the athlete believes these opportunities are only available through continued participation in the sport. They propose that the higher the involvement opportunities, the greater an athlete's sport commitment.

REVIEW OF THE SPORT COMMITMENT LITERATURE

Other Models of Sport Commitment

One of the earliest discussions of sport commitment emerged from the work of Carmack and Martens (1979) who developed a Commitment to Running scale. Examination of the items in the scale suggest a simple model of commitment because 9 of the 12 items seem to measure enjoyment. For example, three of the specific statements which are answered on a five-point Likert scale are, "I look forward to running", "Running is drudgery", and "Running is pleasant" (p.42). Thus, the underlying assumption appears to be that enjoyment is related to commitment, a premise actually incorporated into the sport enjoyment construct in the Sport Commitment Model.

A similar discussion of sport commitment appeared when the Commitment to Running scale was modified to examine individuals' commitment to physical activity (Corbin, Nielsen, Borsdorf, & Laurie, 1987). These researchers changed the Commitment to Running scale by simply replacing the word "running" with the words "physical activity" to assess a more generalized commitment. Since the Commitment to Physical Activity scale is a modified version of the Commitment to Running scale it has a similar underlying conceptualization of commitment. In fact, the results of this study show that sport enjoyment is related to sport commitment. These authors demonstrated that individuals with reported "high" activity levels had a significantly higher commitment score than those who reported a "high moderate" activity level. Furthermore, individuals with reported activity levels of "low moderate" and "low" had significantly lower commitment scores than the "high moderate" group. The enjoyment factor in one's commitment supported by this study is, again, very similar to the sport enjoyment construct in the model developed by Scanlan and her colleagues (Scanlan & Carpenter et al., 1993).

The theoretical model of sport commitment developed by Schmidt and Stein (1991) proposes that athletes' continued participation in sports is dependent on rewards, costs, investments, satisfaction, and alternatives. These five factors appear to be very similar to four of the determinants which Scanlan and Carpenter et al. (1993) suggest: involvement opportunities, personal investments, sport enjoyment, and involvement alternatives.

Finally, Yair (1990) identified two types of commitment, structural and personal, in his model of commitment. Structural commitment is theorized to be determined by irretrievable investments, available alternatives, social

pressures, and termination procedures. Irretrievable investments are defined as "those investments lost by an actor should he withdraw from his present line of action" (p. 216). He identified social pressures as "forces exerted by and cues sent from significant others" (p. 216), available alternatives as "an actor's 'market possibilities' in his or her social situation" (p. 216) and termination procedures as "the processes one must engage in in order to abandon some present activity and engage in another role" (p. 216). According to Yair, commitment is greater when investments are high, the activity is socially supported, alternatives are unattractive, and termination procedures are difficult.

Satisfaction, a definition of self, and sense of moral obligation are the components of personal commitment (Yair, 1990). The rewards and costs brought about by a relationship or role are the defining characteristics of the satisfaction construct. A definition of self "occurs in cases where the role and person merge" (p. 216). A sense of moral obligation is defined as one's internalized feeling of moral responsibility to the role or relationship. Greater commitment results from increased satisfaction, a high sense of moral obligation, and when individuals define themselves in terms of a role. Results of this study indicated seven factors related to sport commitment: identification, social pressure, moral obligation, need to achieve, cost, pride, and existential rewards. Significant relationships between these factors and sport commitment were demonstrated.

Although these seven factors do not correspond exactly with the constructs in the Sport Commitment Model, there appears to be a great deal of similarity between them. These possible parallels between Scanlan's model

(Scanlan & Carpenter et al., 1993) and Yair's model (Yair, 1990) are presented in Figure 2. For example, Yair's social pressures is very similar to social

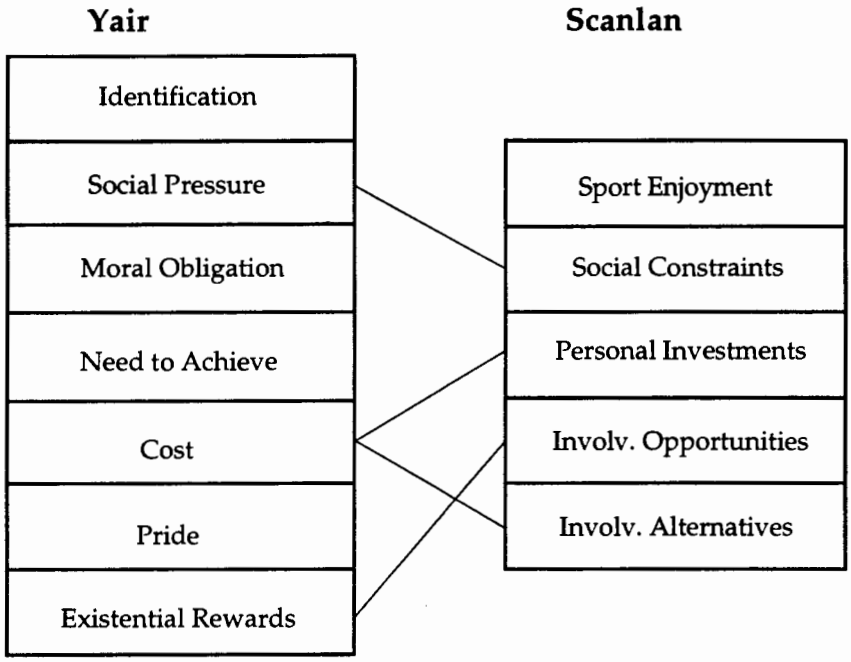

Figure 2. Possible parallels between Yair's and Scanlan's models of sport commitment.

constraints in the Sport Commitment Model. He describes those questions which load on the social pressures factor as, "pointing to the 'side bets' which a runner has invested in his role as a runner, and the social cost that will have to be payed [sic] in order to quit running" (p. 218). The questions which loaded on the factor labeled as cost correspond to the constructs of personal investments and involvement alternatives in the Sport Commitment Model since the questions ask about amount of time spent running and about "other things" that are missed because of running. Finally, existential rewards is similar to the construct of involvement opportunities because it refers to "the rewards which running brings" (p. 218).

Initial Results of the Sport Commitment Model

Initial research on the Sport Commitment Model revealed that the items from the questionnaire formed reliable scales for all six constructs in the model (Scanlan & Carpenter et al., 1993; Scanlan & Simons et al., 1993). Although the personal investment scale initially demonstrated weak reliability, when the money item was removed from the scale, the alpha coefficient increased to an acceptable level. Results also indicated that the five determinants in the Sport Commitment Model were separate and distinct factors. In addition, results of these studies revealed that the five determinants of sport commitment (sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities) are not equally important in predicting sport commitment (Carpenter et al., 1993; Scanlan & Carpenter et al.; Scanlan, & Simons et al.).

Scanlan and Carpenter et al. (1993) tested this model on a group of youth athletes participating in Little League. Results indicated that sport enjoyment and personal investments were the most important determinants, accounting for 58% of the variance in sport commitment. Carpenter et al. (1993) examined the same model on a group of 1342 youth athletes from the sports of football, soccer, and volleyball using structural equation modeling. They found that involvement opportunities was the most important determinant of sport commitment followed by sport enjoyment and personal investments. The construct of involvement alternatives was problematic in all of the analyses; the authors reported that subjects demonstrated difficulty understanding the question during examination. Furthermore, the correlation between the sport commitment scale and involvement

alternatives scale indicated no relationship. These findings suggest that involvement alternatives was either not important for sport commitment in a youth sport domain or was not effectively measured.

The finding that sport enjoyment is a strong predictor of commitment is not surprising. As mentioned earlier, numerous studies have demonstrated that fun is the major reason for youth participation in sports (Gill et al., 1981; Gould, Feltz, & Weiss, 1985; Gould, Feltz, Weiss, & Petlichkoff, 1982). In fact, Scanlan and Simons (1992) consider sport enjoyment to be "a cornerstone of motivation in sport" (p. 204). Studies which examined the Commitment to Physical Activity scale also demonstrated that enjoyment is a determinant of commitment (Corbin et al., 1987; Deeter, 1988). Since the variables in this scale appear to be measuring enjoyment, as discussed earlier, the findings that this measure is a good predictor of physical activity level supports the importance of enjoyment to sport commitment.

The majority of studies that have found sport enjoyment to be the most important variable in sport commitment have been done with youth sport groups or non-competitive athletes. The Sport Commitment Model has not yet been tested on elite athletes. In fact, sport psychologists have suggested that other determinants may be more influential for this group of athletes. Curry and Weaner (1987) note that college varsity athletes may not enjoy sports as much because of the demanding training schedules and increased pressures. Scanlan and Carpenter et al. (1993) suggest that other determinants may be more important to sport commitment when examining other types of sport groups. They suggest that involvement alternatives will be significantly more important for elite athletes because of the time

commitments involved. Involvement opportunities also would appear to be a major contributor to commitment for this group of athletes since most of them use sport as their livelihood. Thus, the first research question which this study will address is "Does the significance of specific constructs to one's sport commitment change across athlete groups and if so, which constructs are the most important to elite or professional athletes?"

Social Identity and Sport Commitment

When the Sport Commitment Model is examined further, some research suggests that an important determinant of sport commitment is left out. Identification with one's sport and as an athlete appears to be a major antecedent of continued participation in sport. In fact, Yair (1990) identifies "a definition of self" as one factor contributing to commitment. His analysis showed that the factor labeled identification had the largest role, accounting for 28% of the variance in commitment.

Much of the literature in the area of athletic retirement suggests that the loss of identification with one's sport is a major cause of adjustment problems for retiring athletes. In fact, many authors have applied thanatological theories to the study of athletic retirement because they view this phenomenon as social death for the athlete (Lerch, 1984; Ogilvie & Howe, 1986; Rosenberg, 1984; Wolff & Lester, 1989). These researchers suggest that identification as an athlete is so important to these individuals that loss of this identity inevitably leads to future problems.

Recent research on fan support also demonstrates the importance of being identified with one's sport. Murrell and Dietz (1992) found a relationship between individual fan support and group identification. They

conclude that, "identity esteem, or the extent to which being a member of a group (in this case a group of fans) is important to one's self-concept, was important for attitudinal as well as behavioral support of both sport teams" (p.35). Thus, this finding suggests that commitment (support of team) is influenced by the significance of group identification for the individual.

In the opening paragraph of an article examining the male identity of athletes, Messner (1987) nicely summarizes the identification issue:

> In 1983-1984 I conducted interviews with 30 men who had at one time identified themselves as athletes. When I explained to one man in his late 30s that I was "Pursuing an understanding of the lives of ex-athletes", he winced. When asked about his reaction, he replied, "I'm *not* an *ex*-athlete. Just because my career is over doesn't mean I am no longer an athlete." His statement only begins to give us an appreciation of the *depth* of the sense of identification that many men develop with their roles as athletes. (p.53)

This statement also emphasizes the importance athletes place on being identified as such and suggests that the importance of being identified as an athlete may help determine the length of time an athlete will continue to participate in sports.

A number of possible explanations exists for why Scanlan and her colleagues (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan & Simons et al., 1993) do not specifically include identification as an antecedent of sport commitment. First, the Sport Commitment Model was derived from models developed to explain commitment in romantic relationships. Since the literature does not cite the importance of identification as a particular person's mate as a determinant of one's commitment, the identification construct was not recognized and was not included. It is also possible that this construct is incorporated into one of the other five determinants in the Sport

Commitment Model. For example, one of the variables for the involvement opportunities construct appears to tap the identification factor ("Would you miss being a 'sport' player if you left the program?"). Thus, the second question this research will examine is whether sport identification is already included in one of the five determinants in the Sport Commitment Model and if it is not, whether it is a separate antecedent of sport commitment. If it does appear to be a separate determinant, what is its importance to sport commitment?

RESEARCH GOALS AND HYPOTHESES

This study seeks to replicate the work on the Sport Commitment Model (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan & Simons et al., 1993) on a group of elite, professional athletes. One goal of this research was to test the discriminant and construct validity of the various constructs in the model.

Hypotheses

Hypothesis 1. Sport identification is a distinct construct and separate from any of the constructs of the Sport Commitment Model.

Hypothesis 2. This separate and distinct construct of sport identification is a significant determinant of an elite, professional athletes' sport commitment.

Hypothesis 3. The Sport Commitment Model is appropriate for professional athletes but the dominant predictors of these athletes' commitment are different from those found for youth athletes.

DATA COLLECTION

METHOD

Subjects

One hundred and ninety professional football players from two teams in the Canadian Football League (CFL) (n = 121) and one team in the National Football League (NFL) (n = 69) completed the questionnaire. One hundred and eighty three subjects were included in the analysis because seven of the athletes' (3 in CFL and 4 in NFL) responses had response sets that indicated they did not read the questions and were therefore deleted from the subject pool. The racial composition of the sample was 55% African-American, 40% Caucasian, and 5% "other" as reported by the athletes. The composition for playing position was 54% offense and 46% defense. The athletes had an age range from 20 to 36 years of age (M = 26.15, SD = 3.18) and had a range of professional playing experience from 0 to 13 years (M = 3.41, SD = 3.25).

Materials

A modification of the questionnaire developed and tested by Scanlan and her colleagues (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan & Simons et al., 1993) to measure the six constructs of the Sport Commitment Model was used in this study (see Appendix). Although the original questionnaire was developed for children, most of the questions appear to be relevant and applicable to an adult population. Those questions

which were not relevant to an adult population were modified. A discussion of these modifications follows. All items were on a five-point Likert scale with various anchors.

As wording of the social constraints questions appeared inappropriate for adults, an alternate format of the questions was also included in the questionnaire. For example, the question, "I feel I have to play (sport) so that I can be with my friends", was changed to "I feel that if I didn't play (sport), I could not be with my friends". The rationale behind this addition was that the 'I have to' language may have been too strong for adults. Since both formats of the questions were included in the questionnaire, an examination of the effect of the wording change was possible. The two social constraints questions that asked about pleasing mom and dad were changed to ask about pleasing a spouse or girlfriend and someone in the family.

Only one of the personal investments questions was modified. The question that asked about one's monetary investment was modified slightly to be more appropriate for professional athletes. The original question asked about money invested for entrance fees and equipment, whereas the question used for the professional athletes asked about money invested for training expenses like work-out equipment and gym fees. In addition, a question was added that examined the potential loss of income for athletes because they spend time training for their sport rather than working.

The wording for one of the involvement opportunities questions was slightly modified from "Would you miss your head coach..." to "Would you miss your interaction with coaching staff members..." because adults don't necessarily have the same type of relationships with their head coaches as children.

For the involvement alternatives scale, the initial instructions and questions were modified. The athletes were first asked to suppose they could no longer play professional sports and then to think of the most attractive occupation in which they could realistically be employed. Next, they were asked to rate the attractiveness of this alternative career compared to their career as professional athletes. Three of the four original questions were included and the wording "compared to playing (sport)" was added to two of the questions.

The items used to measure identification were developed by the researcher. These items were developed to assess how important it is to the athlete to be identified as an athlete and as a member of his sport group. Two of the questions were taken from a questionnaire developed by Santee and Jackson (1979) in their research on commitment to self-identification and were modified for the current questionnaire. The structure and wording of the items are similar to those used by Scanlan and her colleagues, and the same five-point Likert format was used for these items.

To validate all the new and modified questions, data from a pilot study with 39 male college scholarship athletes participating in soccer, golf, and track was collected and analyzed. On the basis of these analyses, no questions were changed or deleted since every scale demonstrated good internal consistency reliabilities. All scales had an alpha coefficient greater than .72. Instructions for the involvement alternatives questions were modified to clarify that the athlete could not pursue both the sport and the alternative activity at the same time since the college athletes seemed confused by the instructions. The pilot questionnaire contained the wording, "instead of playing (sport)" at the end of the instructions. This was changed to, "suppose

you could not longer play (sport)" and positioned as the opening phrase of the instructions.

Procedure

The surveys were administered by either a coach or team member at a team meeting during the first two weeks of training camp. The athletes were assured by the person administering the questionnaire that the survey was not for the coaching staff and was for a student's thesis project. The athletes were also informed that participation was completely voluntary and were asked to return the survey blank if they did not wish to participate. No time limit was given for completing the survey and the administrator remained at a distance while the athletes answered the questionnaire. The athletes completed the surveys during the team meeting and placed their surveys in the back of the room when finished.

DATA ANALYSIS

RESULTS

A multivariate analysis of variance (MANOVA) was conducted to analyze response differences on the seven scale scores across teams to determine if the method of survey administration (coach vs. team member) created response bias. The MANOVA yielded significant results on the Wilks Lambda test, $\Lambda = .843$, $F(14, 314) = 2.004$, $p < .05$. Analysis of the discriminant function indicated that commitment had the strongest contribution to the team differences. The corresponding univariate F-tests indicated significant differences between the three teams on the scales of commitment, $F(2, 163) = 8.615$, $p < .001$, and enjoyment, $F(2, 163) = 3.496$, $p < .05$. Sudent-Newman-Kuels post hoc test revealed that the one team which had the surveys distributed by a team member had significantly lower commitment scale scores than the two teams with coach administration. However, the same pattern of differences was not found for the other scale. Post hoc tests on the enjoyment scale showed a significant difference between only one of the teams with coach survey administration and the team with player administration. Thus, these team differences were not consistent across the scales as would be expected if the method of administration affected the athletes responses.

The significantly higher team commitment scores from the teams in which the survey was administered by a coach does suggest that these athletes

may have reported higher commitment levels to please their coach. However, if the players were, in fact, responding to the questions based on how they felt the coach would want them to respond, this pattern would be expected on the personal investment items which asked about investments of time and effort and also the involvement opportunities question which asked if they would miss the coaching staff. The results indicated no significant differences across the teams on the personal investments scale. Examination at an individual item level revealed no significant team response differences on the involvement opportunities item and the personal investment question which asked about time investment. There was a significant difference for the effort investment question, $F(2, 179) = 3.264$, $p < .05$, but this difference was found between only one of the coach administered teams and the player administered team.

Reliability and Validity Analyses

Internal consistency reliabilities of the seven scales in the model were assessed by computing Cronbach's alpha for each scale. Reliability was acceptable for sport commitment (.718), sport enjoyment (.899), involvement opportunities (.748) and involvement alternatives (.847).

The social constraints scale with the questions worded as "I feel I have to..." had an alpha value of .673. The social constraints scale with the wording "I feel if I didn't..." had an alpha value of .756. Furthermore, all four items in the scale with the wording "I feel I have to..." had a skewness greater than ±2 whereas, only two of the items on the other social constraints scale had a skewness greater than ±2. On the basis of these results, it was decided that the

social constraints scale with the wording "I feel if I didn't..." would be used in the subsequent analyses.

The personal investments scale with all four items included demonstrated weak internal consistency with an alpha value of .449. Consistent with the findings of Scanlan & Simons et al. (1993) dropping the two items asking about monetary investments from the scale improved the reliability to .756.

Finally, one of the seven items from the identification scale was dropped based on the increase in the alpha coefficient. Deleting the question, "I feel that being a good athlete is my most important quality" increased the value from .792 to .813. In addition, further examination of the question indicated that it may have been too restrictive in its language since it refers to the athlete's "most important quality" rather than "one of (the athletes) important qualities".

Confirmatory factor analysis of 29 variables with 7 factors was conducted using the LISREL (Joreskog & Sorbom, 1989) computer program. The deleted money items from the personal investments scale were included to determine if confirmatory factor analysis also justified the deletion of these items from the scale. Results from the confirmatory factor analysis supported dropping both personal investment items which addressed the issue of money from the personal investments scale. These variables had low t-values and low factor loadings.

After the personal investment items were deleted, the confirmatory factor analysis revealed a high correlation between the scales of identification and involvement opportunities (.781). Examination of the modification indices associated with the items on these two scales indicated that one of the

identification scale items ("If I had to quit playing (sport), I would miss being a part of the group") also loaded on the involvement opportunities factor. Further scrutiny led to the determination that this question addressed the issue of opportunity rather than identification as an athlete and this question was deleted from the scale.

Removing the identification item decreased the correlation between the identification and involvement opportunities scales to .673. The modification indices demonstrated that one of the involvement opportunities scale items ("Would you miss being a (sport) player if you left the program") may load on the identification factor. However, when this item was switched to the identification factor, the modification indices showed that it should be switched back to the involvement opportunities factor. Since it was not a clear indicator of a single factor, the question was dropped from the involvement opportunities scale. The correlation between the identification and involvement opportunities scales reduced to .428 after this item was deleted from the scale.

Results of the confirmatory factor analysis with these four items dropped from the model indicated overall fit of this model was marginal [Adjusted Goodness of Fit Index (AGFI) =0.757; $X^2(254, \underline{n} = 162) = 472.99$, $\underline{p}$ = .000; Root Mean Square Residual (RMR) = 0.078], all t-values for factor loadings were significant and all modification indices were less than 15. All factor loadings were greater than .4 and are presented in Table 1. The high factor loadings and significant t-values demonstrated good construct validity for these scales.

TABLE I

FACTOR LOADINGS FOR CONFIRMATORY FACTOR ANALYSIS

	Factors			
Item	CMT	SCLC	ENJY	PINV
C1	0.602			
C2	0.599			
C3	0.825			
C4	0.584			
SC5		0.670		
SC6		0.822		
SC7		0.586		
SC8		0.581		
SE9			0.876	
SE10			0.875	
SE11			0.756	
SE12			0.819	
PI13				0.829
PI14				0.722

	Factors		
Item	INVOPP	ID	INVALT
IO17	0.475		
IO18	0.841		
IO19	0.705		
ID21		0.647	
ID22		0.818	
ID23		0.814	
ID25		0.602	
ID26		0.446	
IA32			0.806
IA33			0.891
IA34			0.728

Interfactor correlations from the final model are presented in Table 2. According to Scanlan & Simons et al., (1993), the high correlations between

TABLE II

INTERFACTOR CORRELATIONS FOR FINAL SCALES IN THE SPORT COMMITMENT MODEL

	Factor			
	1	2	3	4
Construct	CM	SC	SE	PI
CM	1.000			
SC	-0.091	1.000		
SE	0.651	-0.204	1.000	
PI	0.356	0.020	0.328	1.000
IO	0.521	0.002	0.386	0.157
ID	0.545	0.263	0.406	0.237
IA	-0.204	-0.007	-0.045	-0.011

	Factor		
	5	6	7
Construct	IO	ID	IA
IO	1.000		
ID	0.428	1.000	
IA	0.033	-0.159	1.000

commitment and its determinants are expected since commitment is the dependent variable and all other constructs were developed to predict commitment. Good discriminant validity of the predictors of sport

commitment was evidenced by low modification indices and interfactor correlations below .45 with most below .30.

Deleting one item each from the identification and involvement opportunities scales decreased their alpha coefficients. Dropping the identification item decreased the alpha from .813 to .799. Deleting the involvement opportunities item decreased the alpha from .748 to .671. Further examination of this scale indicated that deleting the question "Would you miss your interaction with coaching staff members if you left (sport)" would increase the alpha to .756. Since interaction with coaches may not be considered an involvement opportunity for adult athletes, this question was dropped from the involvement opportunities scale.

Means, standard deviations, and skewness for the final scales are presented in Table 3. Although the personal investments scale had a

TABLE III

SUMMARY STATISTICS FOR FINAL SCALES IN THE SPORT COMMITMENT MODEL

Scale	Mean	S. D.	Skewness
Commitment (4 items)	16.71	2.79	-0.86
Enjoyment (4 items)	18.34	2.48	-1.58
Identification (5 items)	15.59	4.53	-0.13
Involv. Alter. (3 items)	10.09	3.06	-0.24
Involv. Oppor. (2 items)	8.56	1.76	-1.48
Personal Invest (2 items)	9.13	1.18	-2.10
Social Constraints (4 items)	6.39	3.29	1.79

skewness greater than two, this finding was not surprising since it follows that almost all elite or professional athletes have to invest a great deal of time and effort in the sport to make it to this level of competition.

Correlation and Regression Analyses

Zero-order correlations were computed on the final revised scales to determine if the hypothesized relationships between sport commitment and its determinants were supported. A negative relationship was found between commitment and social constraints ($r = -.016$) which was contrary to the hypothesized direction but this value was not significant. All other correlations between commitment and its predictor constructs were significant and in the hypothesized direction. Commitment was positively related to enjoyment ($r = .472$, $p < .01$), personal investment ($r = .242$, $p < .01$), involvement opportunities ($r = .345$, $p < .01$), and identification ($r = .499$, $p < .01$) and negatively related to involvement alternatives ($r = -.236$, $p < .01$).

Simultaneous regression analysis was performed to determine which constructs contributed a significant amount of variance to one's sport commitment. The overall model was significant, $R^2 = .380$, $F(6, 160) = 16.350$, $p < .001$. Table 4 provides the beta, partial correlations, and t-values for each independent variable in the regression analysis. Only social constraints and personal investments did not contribute a significant amount of unique variance to sport commitment. Identification was the most important variable for predicting commitment and uniquely accounted for 11% of the variance in commitment. Enjoyment uniquely accounted for 7.5% of the variance in commitment and was the second most important variable in

predicting commitment followed by involvement alternatives and involvement opportunities.

TABLE IV

SUMMARY STATISTICS FOR REGRESSION ANALYSIS

Construct	Beta	Squared Partial Corr.	t-value
Identification	0.331	0.111	4.459**
Enjoyment	0.262	0.075	3.608**
Inv. Alt.	-0.172	0.043	-2.686**
Inv. Opp.	0.136	0.024	2.000*
Personal Inv.	0.075	0.008	1.146
Social Constr.	-0.050	0.003	-0.721

*$p < .05$ **$p < .01$

DISCUSSION AND CONCLUSIONS

DISCUSSION

The purpose of this study was to provide evidence that the Sport Commitment Model is appropriate for use with elite professional athletes. The discriminant and construct validity of the various constructs in this model was also tested. Overall, the results from this study support earlier findings from work on the Sport Commitment Model (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan, & Simons et al., 1993) and the model appears to be appropriate for professional football players. Although the scale reliabilities were somewhat lower than earlier findings (Scanlan & Carpenter et al.; Scanlan & Simons et al.), the final scales all had acceptable alpha coefficients greater than .70.

The original social constraints scale used by Scanlan and her colleagues (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan, & Simons et al., 1993), however, did not appear appropriate for adult athletes. The results reported here support the researcher's initial suspicion that the wording "I feel I <u>have</u> to..." may have been too restrictive for adult athletes. The researcher felt that low responses on these questions could not necessarily be interpreted as a lack of social pressure to participate in sport, but may reflect the fact that most adults don't feel they "have to" do anything. In fact, the questions with the less restrictive wording ("I feel if I didn't...") had higher reliabilities and variability, confirming the researcher's suspicion. It must

also be noted, however, that the new wording for the social constraints items does change the meaning of these questions and may not capture the original meaning of social constraints in the Sport Commitment Model (Scanlan & Carpenter et al.). Again, however, the original definition may not apply to adult athletes. This group may not feel an "obligation to remain in the activity" but do feel pressure to continue participation.

Consistent with the earlier findings of Scanlan and Simons et al. (1993), including the money items with the personal investment construct failed to define a reliable scale. This finding suggests that many athletes do not invest a lot of money into their sport. This may be especially true for elite athletes. These athletes often have their expenses paid by those who want them on their teams. As Scanlan & Simons et al. noted, however, investments of money would most likely be important for athletes who are involved in sports that require a large personal financial investment such as golf or snow skiing and the athletes who have been studied thus far are involved in sports in which the expenses are often paid by the organization or the team.

This group of athletes also demonstrated that involvement alternatives defined a reliable and important scale. Based on Scanlan & Simons et al. (1993) recommendation, it was determined that professional athletes are, in fact, unable to pursue many alternative activities. This study, however, focused on alternative jobs rather than leisure activities because the researcher felt it was a more appropriate question for athletes whose livelihood comes from playing their sport. Furthermore, adding the wording "compared to playing (sport)" was successful because it emphasized what the construct tried to measure; that activities and jobs cannot be pursued simultaneously.

The final involvement opportunities scale was internally consistent and reliable. Although the final scale was only defined by two items, either the two deleted items were not measuring this construct as defined by Scanlan and Carpenter et al. (1993) or perhaps they were measuring another factor. First, as mentioned earlier, interaction with coaches does not appear to be an appropriate involvement opportunity for adult athletes. For professional athletes, the coaches are their bosses and many adults are not friends with their bosses and do not look forward to spending time with them. Second, the other question that was dropped did not appear to distinctly measure involvement opportunities. In fact, further examination of the question, "Would you miss being a (sport) player if you left the program?", suggested that this question reflected both the involvement opportunities and identification constructs.

The final five items on the scale of identification defined an internally consistent and reliable scale. The wording of the item, "I feel that being a good athlete is my most important quality", was inappropriate because the wording "most important quality" was too restrictive and not a good measure of the identification construct. The other item that was deleted from the scale, "If I had to quit playing (sport), I would miss being a part of the group" was possibly a measure of involvement opportunity rather then identification because it asked about being a group member rather than one's individual identity.

The confirmatory factor analysis indicated that, as hypothesized, all six constructs in the Sport Commitment Model as well as the new identification construct were distinct. After dropping from the model the involvement opportunities item that also loaded on the identification scale and the

identification item that wanted to load on the involvement opportunities scale, the final results demonstrated distinct and separate scales which supported Hypothesis 1. The new construct of sport identification is a distinct construct and separate from any of the constructs in the Sport Commitment Model. This hypothesis was also supported by the regression analysis since identification accounted for a significant amount of unique variance in commitment. This demonstrates that the identification construct contributed something to sport commitment that the other constructs do not.

However, this analysis also revealed the need for further research on the involvement opportunities and identification constructs. This study demonstrated that these two factors were separate and distinct but highly related. Those items that were dropped from the scales included aspects of both constructs which explains why these questions loaded on both factors. In the Sport Commitment Model, identification is included in the involvement opportunities construct as one of the "valued opportunities that are only present through continued involvement" (Scanlan & Carpenter et al., 1993). However, this research does suggest that if identification is one type of an involvement opportunity, it is a very important one and should be a separate and distinct construct in the Sport Commitment Model. The involvement opportunities construct in the original model may be so complex that it needs to be separated into two constructs; opportunities that bring happiness to an athlete, such as having good times, being with friends, and winning; and opportunities that make athletes feel good about themselves and increase their self-esteem, such as being identified as an athlete.

Hypothesis 2 was supported by the regression analysis. The final identification scale that was used in the regression was a significant

determinant of elite professional athletes' commitment to their sport. Hypothesis 3 was also supported by the data. The dominant predictors of professional athletes' commitment were different from those found for youth athletes. Earlier studies with youth athletes found personal investments, enjoyment, and involvement opportunities to be the most important determinants of commitment for this group (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993). For professional athletes, the three most important predictors were identification, enjoyment, and involvement opportunities. Squaring the zero-correlations of these three constructs indicated that together they accounted for 59.1% of the total variance in sport commitment. Only four of the six constructs uniquely accounted for a significant amount of variance in sport commitment. Again, identification accounted for the most variance followed by enjoyment, involvement alternatives, and involvement opportunities.

These results demonstrate that enjoyment is an important determinant of commitment for athletes at both youth and professional levels of competition. Although Curry and Weaner (1987) suggested that the increased pressures and training demands of elite competition would decrease enjoyment, perhaps the enjoyment of competition lessens the intensity of these demands and pressures for the professional athlete.

The finding that personal investments was not a significant unique determinant of a professional athlete's commitment but that involvement opportunities and alternatives were significant unique determinants suggests that commitment is based on future or current rewards rather than past investments. The influence of past investments are not considered when an athlete must make the decision of whether or not to continue participating in

the sport. Thus, it follows that for elite athletes the belief that rewards from continued participation are minimal outweighs the importance of their past investment in the sport.

The nonsignificant negative relationship between social constraints and sport commitment supports one of the findings from the latest work on the Sport Commitment Model (Carpenter et al., 1993). These researchers found a significant negative relationship between social constraints and commitment and suggest two explanations for this finding: young athletes don't feel pressure to participate, or that the pressure which causes stress may lower a young athlete's commitment. Although social constraints and commitment had a nonsignificant relationship in this study suggesting that professional athletes' commitment is not influenced by social pressure, the negative direction of the relationship does agree with Carpenter et al. findings. This lack of relationship between social constraints and commitment found in this study indicates that an elite adult athlete's sport commitment is not influenced by social pressures. It is noteworthy that this model is based on commitment as a psychological state which is the athlete's state of mind regarding their commitment (i. e. how committed they feel to their sport) and social constraints may not influence an athlete's psychological commitment. However, it is possible that if behavioral measures of commitment were used (i. e. physically counting the number of hours one practices the sport), social constraints would be a significant determinant and have a positive significant relationship to sport commitment. The athlete that feels social pressure to participate may not be psychologically committed to the sport but will continue participation to avoid the negative sanctions. Future research is needed in this area to

determine the impact of social constraints on both types of commitment: psychological and behavioral.

Since the Sport Commitment Model was only recently developed, much research is needed if we hope to gain a more complete understanding of athletes' commitment. Future directions of research should focus on the differences that might be found with different athlete populations and types of sport. For example, the most important antecedents for male athletes may be different from those for female athletes since male athletes have many more opportunities in the athletic arena. Other differences may emerge between athletes who compete in team sports and those who compete in individual sports. Athletes from other countries with different athletic systems may have different factors influencing their commitment than athletes playing sport in North America.

Another area of future research would be to develop different measurement techniques for the constructs in the Sport Commitment Model. As suggested earlier, as well as by Carpenter et al. (1993), a behavioral measure of commitment may reveal very different results. Since there may be a big difference between what an athlete may say and what he or she actually does, it is important that measures other than self-report be developed if we hope to fully understand an athlete's commitment and the determinants of that commitment.

Additional determinants of an athlete's commitment not included in the Sport Commitment Model must also be researched. In their study with young athletes using structural equation modeling, Carpenter et al. (1993) found that four of the determinants in the model accounted for 68% of the variance in commitment suggesting that this model is fairly complete for this

group of athletes. The constructs of involvement alternatives and identification were not included in their analysis and may explain the variance that was unaccounted for in young athletes' commitment. In this study with professional athletes, the results of the regression analysis indicated that the six hypothesized determinants in the model only accounted for 38% of the variance in commitment. This finding suggests that there are additional factors which influence a professional athlete's commitment that were not tested in this study. Future research with this group of athletes should include personal in-depth interviews that may provide insight as to what are these unknown factors .

Finally, this research was not without limitations. The data collection conditions were not uniform across the three teams since both coaches and players distributed the surveys. Although all the administrators assured the researcher that the same data collection guidelines were followed, employing one of the researchers to distribute the questionnaires would have helped to insure uniform conditions across the teams. Unfortunately, however, professional sport teams rarely allow outsiders into their organizations and this made it difficult to insure that all conditions were controlled. Another limitation of this study was that the use of single time data collection and self-report does not allow us to infer causation. Although the Sport Commitment Model suggests that the antecedents in the model are, in fact, determinants of an athlete's commitment, we can only speculate that this is the case. Despite these limitations, this study does offer new insights into understanding the commitment of athletes.

CONCLUSIONS

This research expanded the work on the Sport Commitment Model (Carpenter et al., 1993; Scanlan & Carpenter et al., 1993; Scanlan, & Simons et al., 1993). This study demonstrates that many of the findings from earlier research with youth athletes also apply to elite or professional athletes. However, this study also contributed new information to this area of research. The current research demonstrated that the involvement alternatives construct formed a reliable scale and is an important determinant of a professional athlete's commitment. It was also demonstrated that although the Sport Commitment Model is appropriate for professional athletes, the dominant predictors of commitment for this group are different from those found for youth athletes (Carpenter et al.; Scanlan & Carpenter et al.; Scanlan, & Simons et al.). The most important contribution, however, is the finding that identification is an additional construct and an important predictor of an athlete's commitment and should be included in the Sport Commitment Model. Although additional research is needed to validate and identify the importance of this new construct, it appears to be a promising addition to understanding an athlete's commitment to sport.

REFERENCES

Becker, H. S. (1960). Notes on the concept of commitment. American Sociological Review, 66, 32-40.

Carmack, M. A., & Martens, R. (1979). Measuring commitment to running: A survey of runners' attitudes and mental states. Journal of Sport Psychology, 1, 25-42.

Carpenter, P. J., Scanlan, T. K., Simons, J. P., & Lobel, M. (1993). A test of the sport commitment model using structural equation modeling. Journal of Sport & Exercise Psychology, 15, 119-133.

Corbin, C. B., Nielsen, A. B., Borsdorf, L. L., & Laurie, D. R. (1987). Commitment to physical activity. International Journal of Sport Psychology, 18, 215-222.

Curry, T. J., & Weaner, J. S. (1987). Sport identity salience, commitment, and the involvement of self in role: Measurement issues. Sociology of Sport Journal, 4, 280-288.

Deeter, T. E. (1988). Does attitudinal commitment predict physical activity participation? Journal of Sport Behavior, 11, 177-192.

Gill, D. L., Gross, J. B., & Huddleston, S. (1981). Participation motivation in youth sport. International Journal of Sport Psychology, 8, 160-177.

Gould, D., Feltz, D. L., & Weiss, M. (1985). Motives for participating in competitive youth swimming. International Journal of Sport Psychology, 16, 126-140.

Gould, D., Feltz, D. L., Weiss, M., & Petlichkoff, L. M. (1982). Participating motives in competitive youth swimmers. In T. Orlick, J. T. Partington, & J. H. Salmela (Eds.), Mental training for coaches and athletes (pp. 57-58). Ottawa: Coaching Association of Canada.

Gould, D., & Horn, T. (1984). Participation motivation in young athletes. In J. M. Silva, III & R. S. Weinberg (Eds.), Psychological foundations of sport (pp. 359-370). Champaign, IL: Human Kinetics.

Gould, D., & Petlichkoff, L. (1988). Participation motivation and attrition in young athletes. In F. L. Smoll, R. A. Magill, & M. J. Ash (Eds.), Children in sport (pp. 161-178). Champaign, IL: Human Kinetics.

Johnson, D. J., & Rusbult, C. E. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. Journal of Personality and Social Psychology, 57(6), 967-980.

Joreskog, K. G., & Sorbom, D. (1989). LISREL 7: User's reference guide. Moresville, IN: Scientific Software, Inc.

Kelley, H. H. (1983). Love and commitment. In H. H. Kelley, E. Bersheid, A. Christensen, J. H. Harvey, T. L. Levinger, E. McClintock, L. A. Peplau, & D. R. Petersen (Eds.), Close relationships (pp.265-314). New York: W. H. Freeman and Company.

Lerch, S. (1984). Athletic retirement as social death: An overview. In N. Theberge & P. Donnelly (Eds.), Sport and the sociological imagination (pp. 259-272). Fort Worth, Texas: Christian University Press.

Messner, M. (1987). The life of a man's seasons: Male identity in the life course of the jock. In M. S. Kimmel (ed.), Changing Men (pp. 53-67). Newbury Park, CA: Sage Publications.

Murrell, A. J., & Dietz, B. (1992). Fan support of sport teams: The effect of a common group identity. Journal of Sport & Exercise Psychology, 14, 28-39.

Ogilvie, B. C., & Howe, M. (1986). The trauma of termination from athletics. In J. M. Williams (Ed.), Applied sport psychology: Personal growth to peak perfection (pp. 365-382). Mountain View, CA: Mayfield.

Rosenberg, E. (1984). Athletic retirement as social death: Concepts and perspectives. In N. Theberge & P. Donnelly (Eds.), Sport and the sociological imagination (pp. 245-258). Fort Worth: Texas Christian University Press.

Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the Investment Model. Journal of Experimental Social Psychology, 16, 172-186.

Santee, R. T., & Jackson, S. E. (1979). Commitment to self-identification: A sociopsychological approach to personality. Human Relations, 32(2), 141-158.

Scanlan, T. K., Carpenter, P. J., Schmidt, G. W., Simons, J. P., & Keeler, B. (1993), An introduction to the sport commitment model. Journal of Exercise & Sport Psychology, 15, 1-15.

Scanlan, T. K., & Lewthwaite, R. (1986). Social psychological aspects of the competitive sport experience for male youth sport participants: VI. Predictors of enjoyment. Journal of Sport Psychology, 8, 25-35.

Scanlan, T. K & Simons, J. P. (1992). The construct of sport enjoyment. In G. C. Roberts (ed.), Motivation in sport and exercise (pp. 199-215). Champaign, IL: Human Kinetic Publishing Inc.

Scanlan, T. K., Simons, J. P., Carpenter, P. J., Schmidt, G. W., & Keeler, B. (1993), The sport commitment model: Measurement development for the youth sport domain. Journal of Sport & Exercise Psychology, 15, 16-38.

Schmidt, G. W., & Stein, G. L. (1991). Sport commitment: A model integrating enjoyment, dropout, and burnout. Journal of Sport & Exercise Psychology, 8, 254-265.

Wolff, R., & Lester, D. (1989). A theoretical basis for counseling the retired professional athlete. Psychological Reports, 64, 1043-1046.

Yair, G. (1990). The commitments to long distance running and levels of activity: Personal or structural? Journal of Leisure Research, 22, 213-227.

APPENDIX

The following questionnaire was designed to find out how you feel about your athletic involvement. Participation is completely voluntary. The answers you give will be confidential. No coaches will have access to your answers. No one will have access to your personal answers except the researchers. Please do not put your name on the questionnaire.

1) Age: _____

2) Marital Status:
___ Single ___ Married ___ Separated ___ Divorced

3) Number of Children: _____

4) Ethnic background:
___ African-American ___ Asian ___ Caucasian
___ Hispanic ___ Latino ___ Other

5) Primary playing position:
___ Offense ___ Defense

6) This current professional training camp is my (1st, 2nd, etc.):

7) The number of years I have been on the regular season roster with a professional (sport) team is (0,1, 2, etc.): _____

8) How many more years would you like to play professional (sport), not including this season (0,1, 2, etc.)? _____

9) How often have you been employed in the off-season?
___ Never ___ Sometimes ___ Always

10) How many times in your college and professional career have you missed two or more games in a row due to an injury (0, 1, 2, etc.)? _____

C=Commitment
SC=Social Constraints
SE=Sport Enjoyment
PI=Personal Investments
IO=Involvement Opportunities
ID=Identification
IA=Involvement Alternatives

For the following questions, please circle the number which best expresses how you feel about your involvement in sports. Please answer honestly and accurately. There are no "right" or "wrong" answers, only your opinions and feelings.

1. How dedicated are you to playing professional (sport)? (C1)

1	2	3	4	5
not at all dedicated				very dedicated

2. How hard would it be for you to quit playing professional (sport)? (C2)

1	2	3	4	5
not at all hard				very hard

3. How determined are you to keep playing professional (sport)? (C3)

1	2	3	4	5
not at all determined				very determined

4. What would you be willing to do to keep playing professional (sport)? (C4)

1	2	3	4	5
nothing at all				a lot of things

5. I feel that if I didn't play professional (sport), my spouse or girlfriend would be displeased. (SC5)

1	2	3	4	5
not at all how I feel				very much how I feel

6. I feel that if I didn't play professional (sport), someone in my family would be displeased. (SC6)

1	2	3	4	5
not at all how I feel				very much how I feel

7. I feel that if I didn't play professional (sport), I could not be with my friends. (SC7)

1	2	3	4	5
not at all how I feel				very much how I feel

8. I feel that if I didn't continue to play professional (sport), people would think I was a quitter. (SC8)

1	2	3	4	5
not at all how I feel				very much how I feel

9. Do you <u>enjoy</u> playing organized (sport)? (SE9)

1	2	3	4	5
not at all				very much

10. Are you <u>happy</u> playing organized (sport)? (SE10)

1	2	3	4	5
not at all				very much

11. Do you have <u>fun</u> playing organized (sport)? (SE11)

1	2	3	4	5
not at all				very much

12. Do you <u>like</u> playing organized (sport)? (SE12)

1	2	3	4	5
not at all				very much

13. How much of your time have you put into playing professional (sport)? (PI13)

1	2	3	4	5
none				very much

14. How much effort have you put into playing professional (sport)? (PI14)

1	2	3	4	5
none				very much

15. How much of your own money have you put into training expenses for professional (sport) for things like gym fees and work-out equipment? (PI15)

1	2	3	4	5
none				very much

16. During the off-season, how great is the potential loss in income that results because you spend your time training for professional (sport) rather than working? (PI16)

1	2	3	4	5
none				very much

17. Would you miss your interaction with coaching staff members if you left organized (sport)? (IO17)

1	2	3	4	5
not at all				very much

18. Would you miss the good times you have had playing (sport) if you left organized (sport)? (IO18)

1	2	3	4	5
not at all				very much

19. Would you miss your friends in organized (sport) if you left the program? (IO19)

1	2	3	4	5
not at all				very much

20. Would you miss being a professional (sport) player if you left the program? (IO20)

1	2	3	4	5
not at all				very much

21. Being a professional (sport) player is an important part of who I am. (ID21)

1	2	3	4	5
not at all how I feel				very much how I feel

22. I enjoy being labeled as a professional (sport) player. (ID22)

1	2	3	4	5
not at all how I feel				very much how I feel

23. I am proud to be identified as a professional (sport) player. (ID23)

1	2	3	4	5
not at all how I feel				very much how I feel

24. If I had to quit playing professional (sport), I would miss being a part of the group. (ID24)

1	2	3	4	5
not at all how I feel				very much how I feel

25. I would feel a great sense of loss if suddenly I were unable to be a professional (sport) player. (ID25)

1	2	3	4	5
not at all				very much

26. When I identify myself to new people, I often tell them I am a professional (sport) player. (ID26)

1	2	3	4	5
none of the time				almost all of the time

27. I think that being a good athlete is my most important quality. (ID27)

1	2	3	4	5
not at all how I feel				very much how I feel

28. I feel I have to play professional (sport) so that I can be with my friends. (SC28)

1	2	3	4	5
not at all how I feel				very much how I feel

29. I feel I have to play professional (sport) to please my spouse or girlfriend. (SC29)

1	2	3	4	5
not at all how I feel				very much how I feel

30. I feel I have to play professional (sport) to please someone in my family. (SC30)

1	2	3	4	5
not at all how I feel				very much how I feel

31. I feel I have to stay in professional (sport) so that people won't think I'm a quitter. (SC31)

1	2	3	4	5
not at all how I feel				very much how I feel

Suppose that after today you could no longer play professional football. Think of the most attractive job that realistically you could get and write it in here.

Answer the following questions based on this alternative career you filled in above.

32. How interesting do you think this job would be compared to playing professional (sport)? (IA32)

1	2	3	4	5
not at all interesting				very interesting

33. How much fun do you think this job would be compared to playing professional (sport)? (IA33)

1	2	3	4	5
not at all fun				very fun

34. How much would you like to do this job, instead of playing professional (sport)? (IA34)

1	2	3	4	5
would not like at all				would like very much

THE END. THANK YOU